

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

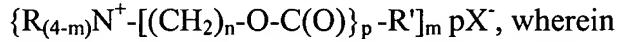
1. (Currently Amended) A method of inhibiting metal corrosion during a subterranean treatment operation comprising:

using providing an acidic treatment fluid comprising an acidic fluid and at least one esterquat;

using the acidic treatment fluid in a subterranean treatment operation; and
allowing at least one esterquat to at least partially inhibit metal corrosion.

2. (Original) The method of claim 1 wherein the esterquat is present in the acidic treatment fluid in an amount of about 5% or below based on the total volume of the acidic fluid.

3. (Currently Amended) The method of claim 1 wherein the esterquat comprises a normal esterquat having the general formula:



R represents a linear or branched chain saturated or unsaturated aliphatic hydrocarbon, aryl, arylalkyl, alkyl amide, hydroxy alkyl, or a mixture thereof, wherein, when there is more than one R group, they may be the same as one another or each may be different from one another;

m is an integer in the range from 1 to 3;

p is an integer of at least 1;

R' represents a linear or branched chain saturated or unsaturated aliphatic hydrocarbon, aryl, arylalkyl, alkyl amide, or a mixture thereof;

n is an integer in the range from 1 to 6; and

X⁻ represents an anionic counter ion, ~~examples of which include, but are not limited to, a halide, sulfate, methosulfate, or methophosphate.~~

4. (Currently Amended) The method of claim 1 wherein the esterquat comprises a reverse esterquat having the general formula:

$\{R_{(4-m)}N^+ - [(CH_2)_n - C(O) - O\}_p - R'\}_m pX^-$, wherein

R represents a linear or branched chain saturated or unsaturated aliphatic hydrocarbon, aryl, arylalkyl, alkyl amide, hydroxy alkyl, or a mixture thereof, wherein, when there is more than one R group, they may be the same as one another or each may be different from one another;

m is an integer in the range from 1 to 3;

p is an integer of at least 1;

R' represents a linear or branched chain saturated or unsaturated aliphatic hydrocarbon, aryl, arylalkyl, alkyl amide, or a mixture thereof;

n is an integer in the range from 1 to 6; and

X⁻ represents an anionic counter ion, ~~examples of which include, but are not limited to, a halide, sulfate, methosulfate, or methophosphate.~~

5. (Currently Amended) The method of claim 3 wherein R further comprises a substituent group ~~comprising selected from the group consisting of~~ an aryl group, an alkoxy group, a hydroxyl group, an aryloxy group, an amido group, and/or a combination thereof.

6. (Currently Amended) The method of claim 4 wherein R further comprises a substituent group ~~comprising selected from the group consisting of~~ an aryl group, an alkoxy group, a hydroxyl group, an aryloxy group, an amido group, and/or a combination thereof.

7. (Currently Amended) The method of claim 3 wherein R' further comprises a substituent group ~~comprising selected from the group consisting of~~ a hydroxyl group, a carbonyl group, an amido group, an aryl group, a sulfur, and/or a combination thereof.

8. (Currently Amended) The method of claim 4 wherein R' further comprises a substituent group ~~comprising selected from the group consisting of~~ a hydroxyl group, a carbonyl group, an amido group, an aryl group, a sulfur, and/or a combination thereof.

9. (Original) The method of claim 1 wherein the acidic fluid exhibits a pH of less than about 6.

10. (Original) The method of claim 1 wherein the acidic fluid exhibits a pH of less than about 4.

11. (Currently Amended) The method of claim 1 wherein the acidic fluid ~~comprises~~ is selected from the group consisting of hydrochloric acid, hydrofluoric acid, acetic acid, formic acid, hydroxyfluoboric acid, citric acid, EDTA, or and a combination thereof.

12. (Original) The method of claim 1 wherein the acidic treatment fluid further comprises a surfactant.

13. (Original) The method of claim 12 wherein the acidic treatment fluid comprises a surfactant in an amount from about 1% of the volume of the esterquat to about 100% of the volume of the esterquat.

14. (Currently Amended) The method of claim 12 wherein the surfactant is a non-ionic surfactant ~~comprising~~ selected from the group consisting of an alkyoxylate, an alkylphenol, an ethoxylated alkyl amine, an ethoxylated oleate, a tall oil, an ethoxylated fatty acid, and or a combination thereof.

15. (Currently Amended) The method of claim 12 wherein the surfactant is a cationic surfactant ~~comprising~~ selected from the group consisting of an alkylamine oxide, an alkylammonium salt, and or a combination thereof.

16. (Currently Amended) The method of claim 12 wherein the surfactant is an anionic surfactant ~~comprising~~ selected from the group consisting of an α-sulfonated ester, an alkylbenzenesulfonate, and or a combination thereof.

17. (Original) The method of claim 1 wherein the acidic treatment fluid further comprises a solvent.

18. (Original) The method of claim 17 wherein the acidic treatment fluid comprises a solvent in an amount from about 1% of the volume of the esterquat to about 100% of the volume of the esterquat.

19. (Currently Amended) The method of claim 17 wherein the solvent ~~comprises~~ is selected from the group consisting of water, an alcohol, a glycol, a glycol ether, and or a combination thereof.

20. (Currently Amended) The method of claim 1 wherein the acidic treatment fluid further comprises an additional traditional corrosion inhibitor.

21. (Currently Amended) The method of claim 20 wherein the ~~traditional~~ corrosion inhibitor ~~comprises~~ is selected from the group consisting of cinnamaldehyde, an acetylenic alcohol, a fluorinated surfactant, a quaternary derivative of a heterocyclic nitrogen base, a condensation product of a carbonyl-containing compound, a nitrogen-containing compound and an aldehyde, a formamide, a surface active agent, a solvent, and or a combination thereof.

22. (Original) The method of claim 20 further comprising iodine.

23. (Currently Amended) The method of claim 1 wherein the esterquat included in the acidic treatment fluid has a physical form ~~comprising~~ selected from the group consisting of a liquid, a solution, a solid, and or a combination thereof.

24-86. (Cancelled)